

## TWO NEW SPECIES OF *ETHMIA* HÜBNER FROM CHINA (LEPIDOPTERA: ELACHISTIDAE: ETHMIINAE)<sup>1</sup>

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ABSTRACT: Two new species *Ethmia antennipilosa* and *E. cribravia* from Guangxi and Yunnan provinces of China are described. Photographs of the adults and genital structures are provided.

KEY WORDS: Lepidoptera, Elachistidae, Ethmiinae, *Ethmia*, new species, China

*Ethmia* is the largest genus in Ethmiinae, with more than 90 species described in the Palearctic Region. The genus is represented in China by 46 species reported previously (Sattler, 1967; Amsel, 1969; Liu, 1980; Liu and Xu, 1982; Wang and Zheng, 1997; Kun and Szaboky, 2000; Kun, 2001; Kun, 2002a; Kun, 2002b). The purpose of this paper is to describe two new species of *Ethmia* from China.

### *Ethmia antennipilosa* Wang and Li, sp. nov.

(Figs. 1, 3, 5)

**Diagnosis:** This new species is similar to *Ethmia epitrocha* (Meyrick) in pattern and male genitalia (Meyrick, 1914; Sattler, 1967), but can be separated from the latter by having an antenna with basal half of flagellum widely expanded; a bifurcate uncus from about middle; anterior part of gnathos with anterior margin rounded; a ventral margin of sacculus gently arched.

**Type Data:** Holotype ♂: China, Hengxian (22.6° N, 109.2° E), Guangxi Province, July 18, 2002, coll. Yanli Du, genitalia slide No. W03065. Deposited in the Department of Biology, Nankai University, Tianjin, China.

**Description (Figs. 1, 3).** Head: frontoelypeus shining black, medially tinged with white scales; vertex white. Antenna (Fig. 3) with scape white, with black scales along anterior and posterior margins; flagellum black, basal half greatly expanded, compressed dorsoventrally, with long yellowish-white scales, forming a hairbrush on posterior margin, compact rough scales; distal half gradually thinned toward apex, ending in point. Labial palpus black, with appressed scales; second segment thick and long, about 1.5 times as long as diameter of compound eye, dotted with white scales on dorsal surface; third segment thin, shorter than 1/2 of second, distal half white, pointed apically. Thorax grayish white, with four black spots: two spots near anterior margin, two near posterior margin. Tegula grayish white, with one black spot near anterolateral margin. Forewing: length 10.5 mm; ground colour light gray, somewhat pale brown; costal margin gentle; apex rounded; fourteen irregularly shaped black spots or blotches scattered on surface: three larger elongate blotches along basal half of costal margin; cell with four spots: one at base, one at 2/3 length and two other larger elongate spots near distal end; fold with three spots: one at base, 2/5 length and 3/5 length respectively, the basal spot is smallest; tornus with one spot above; one small spot at basal 1/4 near posterior margin; two irregular large spots near apex; nine small, black marginal spots from distal portion of costal margin to termen; fringe whitish gray. Hindwing and fringe pale gray. Fore and mid legs white above, black with white markings below; hind leg grayish white, tarsus brown basally, white apically.

**Male genitalia (Fig. 5).** Uncus widely bilobed apically, each lobe short, with rounded apex. Gnathos spinose, with posterior part subtriangularly shaped, the posterior margin dentate, slightly

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concave at middle; anterior part wider, the anterior margin rounded. Labis spinose and weakly sclerotized, with a rounded apical margin. Valva gradually narrowed from base, distal 1/3 elongate, with fine and large setae; apex blunt. Sacculus weakly sclerotized, slightly arched ventrally, with a large distal spine. Costa forming a sclerotized plate from base to 2/5 length. Aedeagus strongly curved basally, with a small sclerotized plate near apex.

**Female.** Unknown.

**Etymology.** The specific epithet is derived from the Latin, *antenna*, meaning long projection, as in those sticking up on sails, and *pilosa*, meaning hairy or pilose, referring to the specialized scales forming a hairbrush on the dorsal edge of antenna.

### *Ethmia cribravia* Wang and Li, sp. nov.

(Figs. 2, 4, 6)

**Diagnosis.** This species is similar to *Ethmia dehiscens* Meyrick (Meyrick, 1924; Sattler, 1967), but differs from the latter by having a hindwing with long ochreous brown scales along the anal margin, dorsally projected valva at end and vesica of aedeagus with several cornuti.

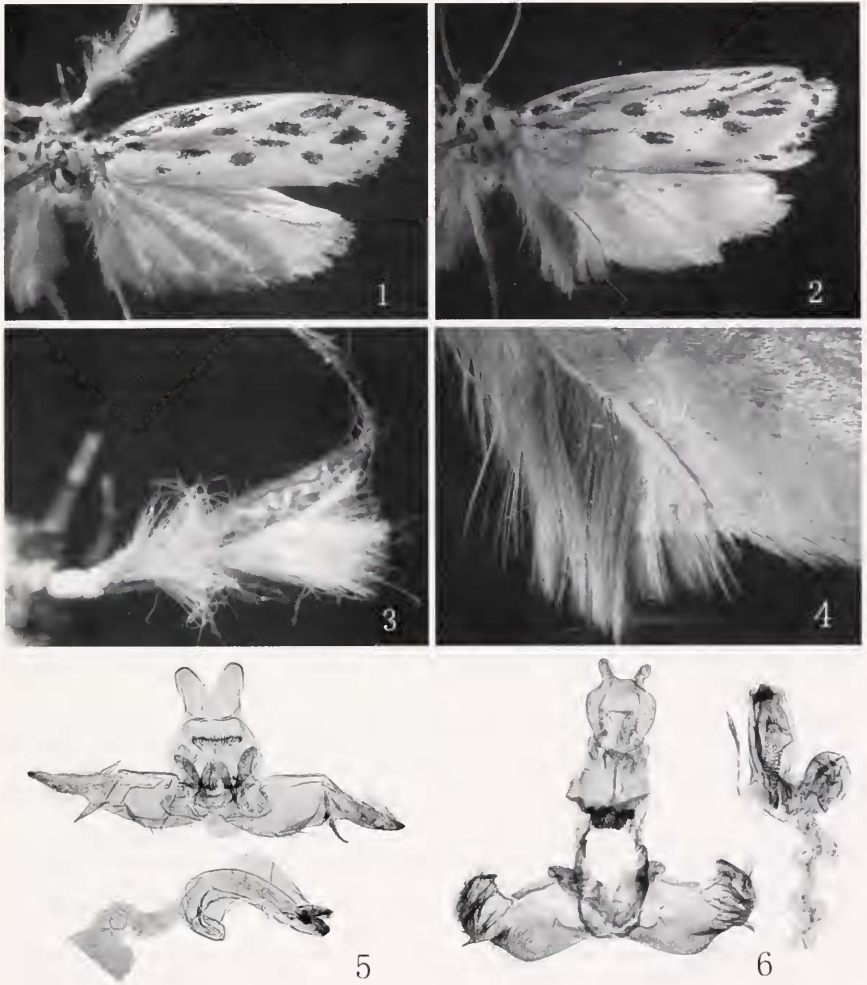
**Type Data.** Holotype ♂: China, Lijiang (26.8° N, 100.2° E), Yunnan Province, Apr 11, 1974, coll. Yao Zhou and Feng Yuan, genitalia slide No. W03071. Paratypes: 2 ♂♂, other same data as holotype. Deposited in the Department of Biology, Nankai University, Tianjnn, China.

**Description (Figs. 2, 4).** Head: frontoclypeus and vertex whitish gray, posterior area of vertex with a black spot at middle. Antenna filiform; scape blackish gray on dorsal surface, grayish white on ventral surface, flagellum gray. Labial palpus with first segment whitish gray; second segment with basal 2/5 black except for inner side; third segment with basal 1/3 black. Thorax brownish gray, with three black spots triangularly arranged. Tegula brownish gray except for base whitish, with a pair of black spots at base. Forewing: length 12.5 mm; costal margin gently arched; ground color brownish gray, overlaid with 16 black streaks and spots: costal margin with one spot at base, two larger spots beside this one near costal margin; cell with two rounded spots respectively set at middle near upper margin and at end, the latter larger, longitudinally extending inward; fold with three spots respectively set at base, middle and end; eight streaks extending from basal 1/5 near costal margin to around end of cell; posterior margin with one elongate spot at distal 1/3; 10-11 irregularly rounded small dots extending from distal 2/5 of costal margin and along termen to beyond tornus; fringe gray. Hindwing pale gray, with piliform ochreous brown scales on anal margin (Fig. 4). Fore and mid legs black, tarsomeres black basally, white apically. Hind leg whitish gray, except tarsus brown. Abdomen brown.

**Male genitalia (Fig. 6).** Uncus produced into two large lobes near half length, and irregularly rounded, caudal margin with a pair of short apex-rounded processes. Posterior part of gnathos heart-like in shape, spined, with dense short spines along posterior margin, which is bluntly rounded; anterior part somewhat trapezoidal in shape, wider than posterior part, densely with short strong spines, straight anteriorly. Labis relatively short, with short spines, concave inward at ventral 2/3, apex rounded. Valva with basal 2/3 broad; distal 1/3 slightly narrowed, apex rounded and margined with strong setae, dorsally forming a projection at end pointing upward, ventrally with a short spine near apex. Costa straight, sclerotized. Sacculus weakly sclerotized, with ventral margin straight in basal half, forming an obtuse angle at about middle. Aedeagus relatively thick, bent at basal 1/3; cornuti consisting of several spines.

**Female.** Unknown.

**Etymology.** This specific epithet is derived from the Latin, *cribravins*, meaning tufty, and it refers to the long setae along the anal margin of the hindwing.



Figs. 1-6. *Ethmia* spp. 1. Adult *Ethmia antennipilosa* sp. nov. (male). 2. Adult *Ethmia cribravia* sp. nov. (male). 3. Antenna of *Ethmia antennipilosa* sp. nov. showing specialized scales. 4. Part of hindwing of *Ethmia cribravia* sp. nov. showing specialized setae of anal area. 5. Male genitalia of *Ethmia antennipilosa* sp. nov. 6. Male genitalia of *Ethmia cribravia* sp. nov.

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